Recent Management of Psoas Abscess
Essay

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List of abbreviations

AIDS	Aquired Immune Deficiency Syndrome.
BUN	Blood Urea Nitrogen.
CD	Crohn's Disease.
CRP	C Reactive Protien.
CT	Computerized Tomography.
DM	Diabetus Mellitus.
E.COLI	Escherishia Coli.
ESR	Erythrocyte Sedimentation Rate.
FUO	Fever of Unknown Origin.
G67	Gallium 67 scan.
GI	Gastrointestinal.
HIV	Human Immuno Deficiency virus.
IUCD	Intra Uterine Contraceptive Devices.
IV	Intra Venous.
K.Pneumoniae	Klebsiella Pneumpnia.
MRI	Magnetic Resonance Imaging.
MRSA	Methicillin Resistant Strain Staphylococcusaureus.
MTB	Mycobacterial Tuberculosis.
PA	Psoas Abscess.
PCD	Precutaneous CT guided Drainage.
PPA	Primary Psoas Abscess.
PTC	Percutaneous Transhepatic Cholangeography.
PUSGD	Percutaneous Ultra Sound Guided Drainage.
SEA	Spinal Epidural Abscess.
THA	Total Hip Arthroplasty.
USS	Ultra Sounographic Scaning.
WG	Wegner's Granulomatosis.

Introduction

Many abdominal conditions are so dramatic in their presentation that patients may go to the emergency room. Psoas abscess has an insidious onset, and patients may be seen by their primary care physician. Because psoas abscess is rare and is uncommonly discussed in primary care medical literature, primary care physicians may miss this Diagnosis.

Therefore, these practioners need to be familiar with psoas abscess to prevent delay in diagnosis and treatment. Psoas abscess may be classified as primary or secondary ,depending on the presence or absence of underlying disease. **(Babafemi T,2001)**

Primary psoas abscess occurs probably from the hematologic spread of organisms. It can occur in patients with diabetes mellitus, intravenous drug abuse, AIDS, renal failure or immunosuppression, which may be due to AIDS or Immunosuppressant use after transplantation.

(Garcia T et al., 2003)

S. aureus is implicated in over 88% of patients with primary psoas abscess. **(Mallick IH et al., 2004)**

Conditions associated with secondary psoas abscess include gastrointestinal disease (Crohn's disease, diverticulitis, appendicitis, colorectal cancer), genitourinary problems (infection, cancer, extra-corporeal shock wave lithotripsy), musculoskeletal lesions (vertebral osteo-myelitis, septic arthritis, infectious sacroilitis), vascular diseases (infected abdominal aortic aneurysm, femoral vessel catheterization) and others (endocarditis, intrauterine contraceptive device use, suppurative

lymphadenitis). **(Mallick IH et al., 2004)**

The classic symptoms of psoas abscess: fever, flank pain and limitation of hip movement are in fact atypical and have presented in only 30 percent of patients. **(Koa PF et al., 1998)**

Psoas abscess is a rare disorder that is often difficult to identify. Patients usually present with flexion of the hip and lumbar lordosis. Distal extension of a psoas abscess may present as a mass in the inguinal region. Proximity to the hip capsule can precipitate symptoms that mimic a septic hip. **(Simons GW et al., 1966)**

Plain film radiography, ultrasonography, CT scan, magnetic resonance imaging (MRI) or FDG-positron emission tomography (PET)may be used to diagnose psoas abscess. Gallium-67 scanning is also an effective method of detecting inflammatory lesions, especially abscesses.

(Lebouthillier G et al., 1993)

Drainage and appropriate antibiotic therapy are mainstay treatments in cases of suppurative psoas abscess. **(Finnerty RU et al., 1981)**

Patients with a suspected primary psoas abscess should be treated with anti-Staphylococcal antibiotics as an empirical treatment even before the culture results are known. In secondary psoas abscesses, broad spectrum antibiotics (covering both aerobic and anaerobic bacteria) should be considered. **(Santaella RO et al., 1995)**

Drainage of the abscess should be performed. It may be carried out through image-guided PCD, which is less invasive, or surgical drainage, which is reported by some authors to be superior to PCD in achieving prompt recovery. **(Santaella RO, et al., 1995)**

In the past, open drainage of the abscess through an iliac crest incision was often the treatment of choice. The current standard of care is percutaneous CT-guided drainage of the abscess.

(Vatandaslar F, Alemdaroglu A,1987)

Aim of the work

This essay aims to review the literature pertaining to the subject of the recent management of psoas abscess.

Psoas abscess is a rare form of retroperitoneal infection. It was first described by Mynter in 1881 who referred this as psoitis.

(**Mynter, 1881)**

As it is a rare clinical entity thought to result from hematogenous spread of an occult bacteremia. Traditionally, this entity has been associated with tuberculous spondylitis. **(William et al., 2005)**

It may occur as a primary infection of the psoas space or as a secondary abscess from the direct extension of infection from adjacent organs. **(Ricci et al., 1986)**

Anatomy:

The psoas muscle is a retroperitoneal muscle that originates from the lateral borders of the 12^{th} thoracic to fifth lumbar vertebrae and inserts in the lesser trochanter of the femur. In 70% of people, it is a single structure (psoas major), but 30% also have a smaller psoas minor muscle, which lies anterior to the psoas major along the same course. It is innervated by branches of L2, L3, and L4 nerves before the formation of the femoral nerve. **(Mohamed Nabil et al., 2005)**

Pathology:

The psoas muscle is in close relationship with all the major abdominal and pelvic structures. Thus, any infectious process in these regions can spread to the psoas muscle and progress into the posterior mediastinum or the anterior thigh. **(Gezer et al., 2004)**

The psoas muscle lies in close proximity to many other organs, including the sigmoid colon, jejunum, appendix, ureters, aorta, renal pelvis, pancreas, iliac lymph nodes, and spine. Thus, infections in these

organs can contiguously spread to the psoas muscle. The psoas muscle has a rich vascular supply that is believed to predispose it to hematogenous spread from sites of occult infection.

(Mohamed Nabil et al., 2005)

Incidence:

In a study of 142 children with psoas abscess, Bresee and Edwards reported 57% occurred on the right side, 40% on the left, and 3% had bilateral abscess. (**Bresee and Edwards, 1990)**

Age and sex:

Psoas abscess is most prevalent in young patients and occurs rarely in the elderly population. **(Gruenwald et al., 1992)**

More than 70% of cases in temperate climates occur in patients younger than20 years with a male-to-female ratio of 3:1.

(William et al., 2005)

Of the reported cases of primary psoas abscess, approximately 70% of patients were younger than 20 years of age. Also the 10 - 40 year old age group accounts for 60 % of all secondary cases.

(Gorgulu et al., 2002)

It has been reported that men are more predominant among patients with psoas abscess, accounting for 73% of the primary and 53.9% of the secondary psoas abscess cases. **(Kao et al., 2001)**

Epidemiology

There were a significant increase in the incidence of psoas abscess from the calculated occurrence of 3.9 cases per year before 1985. The increase was attributed to improved diagnosis with the widespread use of

computed tomography (CT). It is likely that incomplete reporting, particularly in the developing world, spuriously lowered the incidence. Up to 1985, all the cases of psoas abscess reported in developing countries were primary, whereas in the United States and Canada nearly 50% of all cases were secondary. Earlier reports suggested that primary psoas abscess was more common in younger patients, with 83% of the cases diagnosed in patients less than 30 years of age. In contrast, up to 40% of the secondary psoas abscesses were diagnosed in patients more than 40 years old. Primary and secondary psoas abscesses were relatively rare in the elderly. This age distribution is different from the findings in a recent series of 18 patients from John Hopkins University School of Medicine. In that series, researchers found secondary psoas abscess (age range, two to 78 years) to be more prevalent (61%) than primary psoas abscess (age range 27 to 81 years). It is notable that 28% of the patients were over the age of 65. Of the patients with primary psoas abscess, 86% were intravenous drug users, and 57% were infected with the human immunodeficiency virus (HIV).

None of the patients with secondary psoas abscess had HIV infection or a history of intravenous drug abuse. It is possible that the incidence of primary psoas abscess will increase with the HIV pandemic. Other predisposing conditions include diabetes, immunosuppression, and renal failure. **(Mohamed Nabil et al., 2005)**

Pathogenesis of psoas abscess:

An abscess that involves the psoas space may extend along a tract from the posterior mediastinum to the anterior thigh.

(Agrawal et al., 2002)